THE RELATIONSHIP BETWEEN AGRICULTURAL STRATEGY AND INTEGRATION IN THE POULTRY INDUSTRY

[1]J. Csizmásné Tóth
[1]College of Szolnok, Tiszaligeti Sétány 14, 5000, Szolnok, Hungary,
e-mail: tothju@szolf.hu

ABSTRACT

Agricultural strategy has always played a major role in the development of agriculture. Its role is perceivable when reviewing the state of the integration of the poultry industry before and after the transition of the political system. Before the transition, both horizontal and vertical integration solutions were present in the poultry industry in Hungary, however, after the transition only vertical integration solutions remained. The current agricultural strategy (National Rural Strategy 2012-2020) and the sectoral strategy developed by the PPC (Hungarian Poultry Product Council) lays great emphasis on the promotion of forms of integration in accordance with the objectives of the CAP 2014-2020. The level of integration of the poultry industry in Hungary has not yet reached that of Western Europe, as in [1], therefore it is very important to support the existing forms of integration in this sector and to encourage the establishment of further integration.

Keywords: vertical integration, horizontal integration, poultry industry, sectoral strategy, national rural strategy

1. INTRODUCTION

Starting with the 1960s, the main objectives were to improve the status of agriculture and to raise production levels in addition to complex technical development, unlike the Soviet model. The large-scale restructuring, the organization of the foundations of farming was launched in the 1960s and 1970s, and spectacular growth and yield growth had taken place until 1985, but then after 1986 the period of stagnation, the depletion of accumulated assets and resources began, as in [17]. In terms of the quantitative indicators of the agricultural sector, agriculture during this period can be described as dynamically developing, however, the situation is worse if, instead of a merely quantitative comparison, the efficiency of agricultural production is analyzed in a complex way and compared to international data, as in [4]. After the transition of the political system, radical changes occurred in the ownership, organizational, management, production, market and employment relations of the agribusiness sector in Hungary (as a result of restitution, privatization, deregulation and liberalization, and the transformation of cooperatives). The former agricultural wealth and assets, and the technical and technological background of production became fragmented due to restitution and privatization, and the pre-existing vertical and horizontal system of relations in the agribusiness sector disintegrated. The bargaining power of the fragmented producers greatly weakened relative to the more powerful highly capitalized processors and traders, as in [18]. In Hungary the conditions of integration were also made difficult because agricultural transition was not accompanied by the preparation of a modern agricultural strategy, as in [2], thus agricultural policy only marginally supported integration since the transition of the political system, but it would be important to lay emphasis on supporting integration in order to improve competitiveness, as in [16].

2. MATERIALS AND METHODS

The article is a theoretical summary of the presentation of the different national historical development paths of vertical and horizontal integration in the periods before and after the transition of the political system. The status of the current vertical integration of the domestic poultry industry is examined on the basis of secondary research findings, and the stimulating steps taken so far in agricultural policy to support vertical integration in the domestic poultry industry are identified and assessed based on data collected by the author.

3. RESULTS AND DISCUSSION

Two large groups of integrated organizations had a significant role, that is, production systems in terms of horizontal integration, and in terms of vertical integration, Bábolnai Mezőgazdasági Kombinát (Agricultural Combine of Bábolna) and Nádudvari Vörös Csillag Mezőgazdasági Termelő Szövetkezet (Red Star Agricultural Cooperative of Nádudvar), and the integratory activities of poultry processing plants were significant.

According to [6] one of the motives of horizontal integration (the establishment of production systems) is speed, that is, the time for acquiring a high level of expertise accumulated over many years may be reduced, and the use of financial and intellectual services involved in the production process can become feasible at lower costs and with greater efficiency. Another motive is to preserve the independence of the creators, because they will continue to actively participate in the decision-making regarding the integrated activities. The advantage of horizontal integration (production systems) is, therefore, that it preserves the flexibility of independently managed systems, and through high standards of expertise and technology it increases the efficiency of investments.

The objective of production systems is to achieve faster than average growth in the area under integration with the help of leading cutting-edge production technology, and a high level of expertise. Firstly, in production systems advocacy was implemented on a sectoral (branch) level, secondly, the development of the sector (branch) accelerated within the framework of integration, and thirdly, the optimization of agricultural production was attempted. Far-reaching coordination was implemented in the production systems, and extremely strict work discipline prevailed, and subsequently there was a significant increase in yield levels, as in [14]. In 1976 in Hungarian agriculture "21 arable crops production, 13 livestock and 20 horticultural systems operated. 90% of collective farms and 70% of cooperatives were members of some production system" (as in [6], p. 92). In 1982, a total of 75 production systems operated: 21 arable crops, 24 livestock and 29 horticultural systems, as in [13].

In animal husbandry in the poultry sector the production systems achieved outstanding results, as in [6]. However, regarding the operation of production systems several negative aspects can be identified. One of these is the conflict of interests between the systems centre and the member farms, as the systems centre was interested in increasing the average yield, while its members were interested in achieving the net revenue per area unit, as in [14]. On the other hand, a gradual increase in the average yield also resulted in the increase of expenses, production cost and cost price, therefore the production systems could produce a lot, but at a high expense, as in [13]. "The economy of livestock production was no better on the farms joining the livestock production system than on the farms outside the system, with the exception of the poultry sector" (as in [15], p. 394). Higher costs resulted in no improvement in quality either. Thirdly, in the seventies the organization of production systems became rather common, which also enabled weaker farms to become members of production systems. A further loss was the termination of foreign currency loans. All these contributed to the fact that the development of production systems halted in the early eighties.

Ref. [8] contains that combines and mergers/partnerships played a key role in vertical integration. Combines were large companies engaged in vertical production which controlled the entire production and distribution chain from breeding livestock and seeds, through production and processing to the production of technologies and sales. In mergers/partnerships the member companies operated independently in addition to the division of the phases of production among themselves, and played an important role in the integration of small-scale farming.

Since the mid-1970s large agricultural holdings played an important role in the organized integration of small-scale production as they helped small-scale farmers by providing breeding stock, feed and veterinary care, and organized production and sales, by which they played an important role in the stabilization and development of small-scale farming. In the eighties the outsourcing of the livestock in large agricultural holdings to small-scale producers, to domestic farms unfolded. As a result of integrated production, production in large agricultural holdings accounted for two thirds of agricultural production, and domestic farms provided nearly one third thereof, as in [13]. In 1982 large agricultural holdings produced nearly 70% of the feed and 90% of the day-old poultry used by small-scale producers, as in [8].

According to Ref. [8] after the transition of the political system, this ratio reversed, and poultry production that decreased in volume, for the most part was widely provided by private producers, and its integration was provided by processing plants. They supplied day-old poultry and feed on credit, and provided professional consultancy. Integrators were faced with the problem of financing production, as the majority of their current capital requirements were covered by loans. The interest on the loans was transferred to the producers by subtracting it from the purchase price.

In the second third of the nineties, a strong process of concentration occurred among the companies, and the domestic market was characterized by strong competition between the strongest players in the market (Bábolnai Baromfi Rt., Hajdúsági Baromfitermelő Rt., Hungavis Rt./Conavis Kft). The combined domestic market share of Bábolnai Baromfi Rt. and Hajdúsági Baromfitermelő Rt. was 40%, and their share of exports was 56%, as in [10]. After 1997 the market became polarized, one pole being Bábolna Rt., the other pole being Hajdú-Bét Rt., which in 1997 acquired Conavis Ltd. in addition to English/American

capital investment. In 1998 Bábolna Rt. accounted for one fifth of domestic poultry processing, while Hajdú-Bét Rt. over 35%, their combined export market share reached 60%, as in [12]. Production in the poultry sector was characterized by a high degree of integration in this period.

However, during the period between 1999 and 2006, players in the poultry industry that were significant in the 1990s, some of the integrated domestic groups of companies (Carnex Bábolna, Hajdú-Bét) went bankrupt one after the other, as in [9]. This occurred because the status of the sector was aggravated by several factors. The first factor was the crisis of the Russian market. Its effects could already be felt since the summer of 1998, when 35 thousand tonnes of stock accumulated at the poultry processors. In the meanwhile, some producers' output was still growing, which was due to the investment support scheme (promoting capacity increase of producers and processors). The situation was worsened by the sudden saturation of Hungary's EU export markets and the drop in prices resulting from that. In order to solve the situation, the economic policy reacted by drastically decreasing subsidies (both direct subsidies and investment aids) instead of encouraging producers to move towards reasonable and coordinated production cuts. All this led to a general crisis in the sector, as in [18].

The second factor was the accession to the European Union, because after the accession, the poultry sector, being a "lightly regulated" sector, lost sector specific national subsidies it had previously received, and the producers in the sector had access only to very limited forms of assistance, e.g. within the framework of support for young farmers or within the framework of central contribution to investments aiming at environmental protection and animal welfare (but not at increasing the actual production). Due to the European animal husbandry requirements (animal welfare measures) and the more stringent animal health standards domestic poultry meat production decreased. Reference [11] contains a comparison of changes induced by the accession to the EU to the ones of the transition period, because the state gradually withdrew from the support system, competition intensified for every participant of the product chain, cooperation among them was at a low level and they were slow and unwilling to adapt to the market challenges.

The third factor was the drop in domestic demand for poultry products as a result of misleading information on the bird flu epidemic starting in the autumn of 2005, and the reduction of the purchase price. As a consequence, many farmers paused or stopped production. Processors had an opportunity to get rid of their unsaleable stocks only later and at low, depressed prices. The gap was filled up by importing cheap chicken meat from Brazil and Thailand. Because of precautionary animal health measures and the withdrawal of producers, the poultry flock was reduced, as in [9].

The National Rural Development Plan (2004-2006) for example, defines the support of producer groups as a measure, but during the implementation of the National Rural Development Plan in 2004 only a modest sum could be devoted to supporting producer groups due to the high requirements of the regulations. The measures planned under the New Hungary Rural Development Programme (2007-2013) also featured support for producer groups within the first axis of improving the competitiveness of the agricultural and forestry sectors, in which the establishment of approximately 100 new producer groups in the country was envisaged, within the wine, milk, and meat production sectors. As a result of this objective, by 2010 only 13 new producer groups had been formed, as in [19].

The current agricultural strategy (National Rural Strategy 2012-2020) in accordance with the objectives of the CAP 2014-2020, lays a strong emphasis on promoting the cooperation of forms of integration. The encouragement of vertical forms of integration that cover the product line is featured in the current agricultural strategy under the cooperation (partnership) development programme aimed at encouraging the establishment and operation of cooperatives.

The objectives include the promotion of cooperation among partnerships, forms of integration, assistance in establishing cooperative relationship networks and secondary and tertiary cooperatives; the development of a grassroots national system of cooperatives/partnerships, as in [20]. However, the method of implementation of the strategic goals formulated in the National Rural Strategy is not detailed in Darányi Ignác Plan (the framework programme for the implementation of the National Rural Strategy).

4. CONCLUSIONS

The level of integration of the poultry industry in Hungary has not yet reached that of Western Europe, 50% the total broiler flock is produced by farms with livestock populations of under 50,000 birds (KSH [Hungarian Central Statistical Office], (Agricultural Census 2010, data as of 1 June 2010), as in [1]. In the case of the broiler chicken the situation is better because 73.94% of the livestock is produced by farms deemed viable with over 50,000 birds, which in turn represents only 0.9% of broiler chicken farms (Fig. 1).

Hungary still has a high level of fragmentation, the majority of broiler chicken farms, 93.43% raise less than 5,000 birds, but only 21.09% of the livestock falls into this category (Fig. 1).

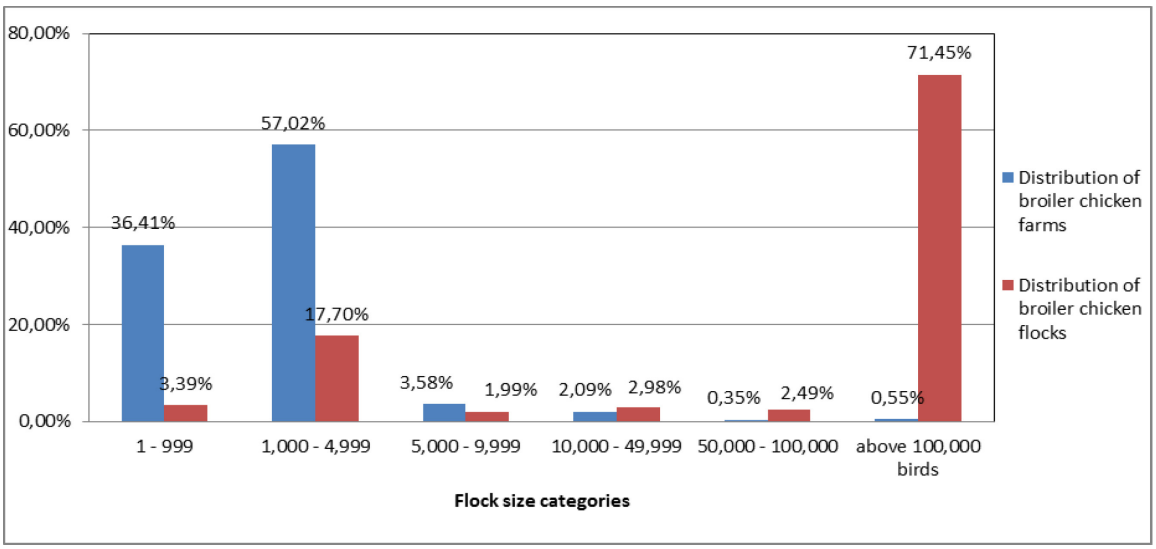

Figure 1. Distribution of broiler chicken farms and broiler chicken populations in size classes (Source: Hungarian Central Statistical Office (KSH), Agricultural Census 2010, 1 June 2010, edited by author)

By supporting integration by the national economy, the vulnerability of our market could definitely be reduced. However, in Hungary some more appropriate technological tools should be used to ensure economic and competitive broiler production. However, it could only be used economically in a large amount of livestock. Technological backwardness and small livestock sizes are also responsible for low natural efficiency indicators (Tab. 1).

Table 1. Comparison of the natural efficiency of broiler production (Source: Industrial Strategy of the Hungarian Poultry Product Council (BTT) from 2014 to 2020)

Natural efficiency indicators	EMSLAND (Germany) broiler integration average in 2012	Hungarian average in 2012
Mortality (%)	3.01	4.40
Average slaughter weight (kg/chicken or bird)	2.43	2.35
Feed conversion ratio (kg/kg)	1.61	1.88
Average slaughter age (day)	39.20	41.30
Average daily weight gain (g/day)	62.09	58.00

The production costs related to broiler production are high in Hungary, because the costs of protein sources, energy and labour are higher here than, e.g. in Brazil or in the USA. Due to the European Union there are stricter animal health and environmental requirements. Basic material production is also hindered by the fact that crop production and animal husbandry have separated and most farms do not own any cropland and cannot produce the necessary amount of feed. The disposal of manure is also a problem. Given the geographical situation of Hungary poultry meat export is more costly due to transport costs, as in [9] and [7]. The low level of interest advocacy in the sector is also a barrier to competitiveness, as in [7] and [1].

Reviewing the problems of the sector it can be observed that the establishment of a sectoral strategy was already very pressing. According to the seven-year development strategy developed by the Poultry Product Council, HUF315 billion of investment is necessary in the sector between 2014 and 2020 to significantly improve the positions of the poultry market players, and to increase the competitiveness of the sector. As a result of the strategy, restraining the gradually increasing imports would be feasible as well (Fig. 2).

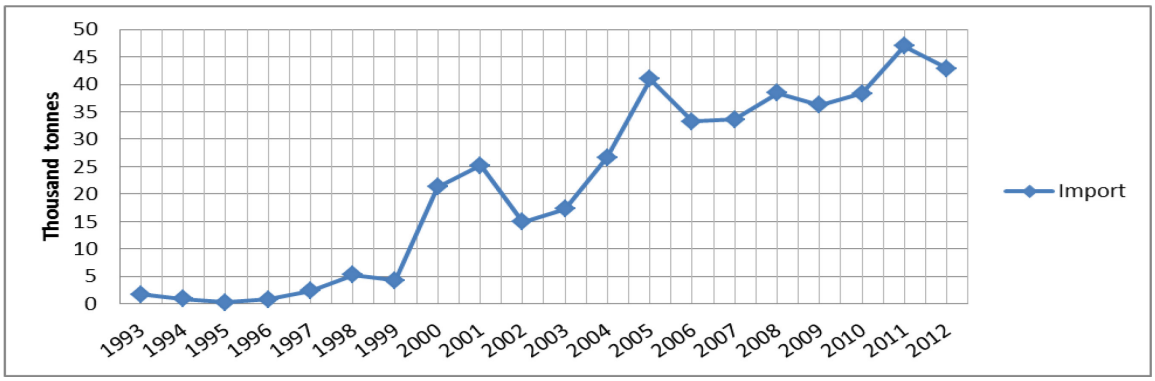

Figure 2. Changes in poultry meat imports (Source: KSH – carcase weight)

One basic requirement of the strategy is the radical reduction of VAT, that is, the reduction of the VAT rate to 5% on meat and poultry products. The previous increase in the VAT rate held back domestic consumption because of the rise in consumer prices (Fig. 3) and strengthened the grey and black economies, which are estimated by the PPC to have increased from 15-25% to 35% within the sector. The radical reduction in the VAT rate on the one hand would help increase domestic demand for the products of the sector, and on the other hand, it would reduce the existing share of the grey and black economies which hinders concentration processes.

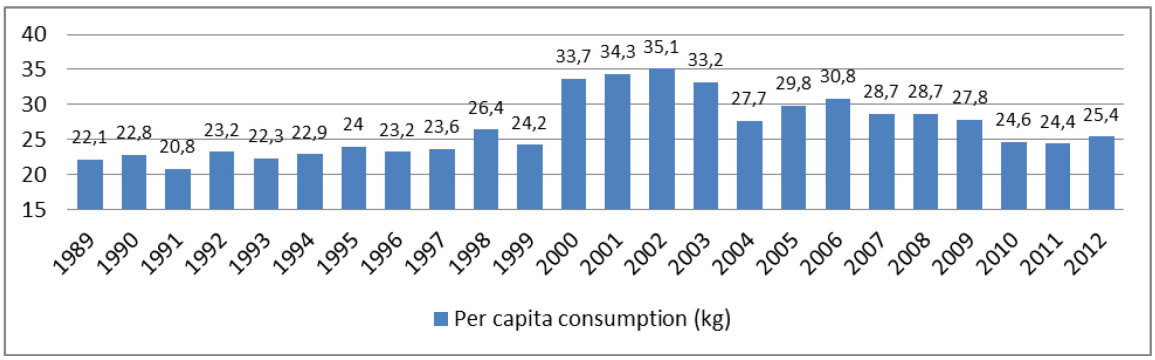

Figure 3. Changes in Hungarian poultry consumption per capita (Source: KSH)

One of the subsequent pillars of the strategy is to raise poultry welfare grants to HUF10 billion, as well as to strengthen integration in the sector. The primary objective of the investment programme is the modernization of the production of raw materials (reconstruction of building stock, development of breeding technology), especially for businesses with an integratory background. Thus, the support of integration was given a key role in the sectoral strategy, which is quite relevant, as it forms the basis of a competitive and efficient economy. The sectoral strategy is in line with the objectives of the CAP 2014-2020 and the National Rural Strategy as well in promoting integration. Therefore, support for integration is the basis for future competitiveness, as Hungary's goal is that similarly to the eighties, the poultry sector could again become one of the thriving sectors of Hungarian animal husbandry.

REFERENCES

[1] Aliczki K. (2012): Baromfiágazat helyzete piaci kilátásai rövid és középtávon, AKI Tanulmányok, https://www.aki.gov.hu/ , date of download: 2012.12.03

[2] Csáki G. (2008): Gondolatok a magyar mezőgazdaság versenyképességéről. Gazdálkodás (Scientific Journal on Agricultural Economics), vol. LII., issue 6. 513-527.

[3] J., Csizmásné Tóth – Zs. Hollósy (2014): Is there a Way out? Assessment of the Situation of the Hungarian Poultry Sector, Economica- A Szolnoki Főiskola Tudományos Közleményei 2014/1. 26-34.

[4] Fertő I. (1993): Egy szocialista sikertörténet bukása. MTA Közgazdaságtudományi Intézet, Budapest.

[5] Magda S. (1998): Mezőgazdasági vállalkozások szervezése és ökonómiája. Mezőgazdasági Szaktudás Kiadó, Budapest.

[6] Márton J. (1977): Az integrálódó mezőgazdaság. Mezőgazdasági könyvkiadó.

[7] Nábrádi A. – Szöllösi L. (2008): A baromfiágazat versenyképességének helyreállítása, Gazdálkodás (Scientific Journal on Agricultural Economics), vol. LII., issue 5. 418-431.

[8] Németi L. (2003): A magyar agrárgazdaság az ezredfordulón. Szaktudás Kiadó Ház Rt, Budapest.

[9] Nyárs L. (2008): A magyarországi baromfiágazat középtávú kilátásai, Gazdálkodás (Scientific Journal on Agricultural Economics), vol. LII., issue 3. 248-252.

[10] Orbánné Nagy, M. (1997): A magyar baromfiipar versenyképessége. Európa Fórum, issue 2. 103-117.

[11] Popp J. (2007): A baromfiágazat jelenlegi helyzete és jövőbeni kilátásai. In: Ágazatspecifikus innováción alapuló projektek generálása a baromfi ágazatban – A baromfiágazat helyzete, kilátásai és fejlesztési lehetőségei (Szerk: Nábrádi András – Szőllősi László) Debrecen, Center-Print Nyomda.

[12] Kozák J. (1999): Magyarország baromfigazdasága és szabályozórendszerének EU konformitása, Agroinform Kiadó, Budapest.

[13] Szabó G. (2001): Élelmiszer-Gazdaságtan. Kaposvár-Debrecen, 2001.

[14] Troján Sz. – Tenk A. (2009a): A hazai mezőgazdasági együttműködésekről a gazdálkodás folyóiratban III. Gazdálkodás (Scientific Journal on Agricultural Economics), vol. LIII., issue 3. 282-284.

[15] Troján Sz. – Tenk A. (2009b): A hazai mezőgazdasági együttműködésekről a gazdálkodás folyóiratban III. Gazdálkodás (Scientific Journal on Agricultural Economics), vol. LIII., issue 4. 390-396.

[16] Udovecz G. – Popp J. – Potori N. (2009): A magyar agrárgazdaság versenyesélyei és stratégiai dilemmái. Gazdálkodás (Scientific Journal on Agricultural Economics), vol. LIII., issue 1. 2-15.

[17] Udvardy P. (2010): Agrár- és vidékfejlesztési stratégiák regionális alkalmazása 4., Agrárpolitika és agrártermelés Magyarországon, Retrieved 1 September 2014 from: http://www.tankonyvtar.hu/hu/tartalom/tamop425/0027_AVF4/index.html

[18] Tömpe F. (2000): A vertikális integráció elméleti és gyakorlati problémái az agrobusinessben (a baromfivertikum példáján), Doktori (PhD) értekezés, Gödöllő.

[19] Új Magyarország Vidékfejlesztési Stratégiai Terv 2007-3013 Stratégiai Monitoring Jelentés, VM, Budapest, 2011., Retrieved 1 September 2014 from: http://umvp.kormany.hu/download/d/3d/40000/%C3%9AMVST_SMJ_2010.pdf

[20] Nemzeti Vidékstratégia 2012-2020, Retrieved 4 April 2013 from: http://videkstrategia.kormany.hu/download/4/37/30000/Nemzeti%20Vid%C3%A9kstrat%C3%A9gia.pdf

[21] Baromfi Termék Tanács Ágazati stratégiája 2014-2020
Retrieved 16 October 2013 from:
http://www.magyarbaromfi.hu/show.php?pageid=0&pagetype=0&newsid=1326
Retrieved 16 October 2013 from:
http://www.magyarbaromfi.hu/show.php?pageid=0&pagetype=0&newsid=1063
Retrieved 16 October 2013 from:
http://www.magyarbaromfi.hu/show.php?pageid=0&pagetype=0&newsid=1332

[22] KSH, ÁMÖ (2010)